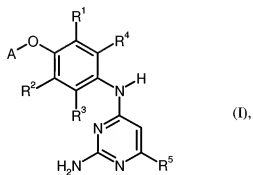


**AMENDMENTS TO THE CLAIMS**

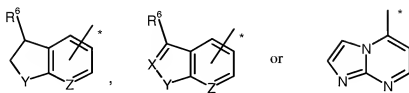
This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A compound of the formula



in which

A represents a radical



in which

X represents N or C-II,

Y represents N-R<sup>7</sup>, O or S

in which

R<sup>7</sup> represents hydrogen, benzyl, phenyl, (C<sub>1</sub>-C<sub>6</sub>)-alkyl or (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl,

where alkyl and cycloalkyl for their part may be substituted by fluorine, hydroxyl, amino, carboxyl, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy, (C<sub>1</sub>-C<sub>6</sub>)-alkylamino or morpholinyl,

Z represents N or C-H,

R<sup>6</sup> represents hydrogen, halogen, trifluoromethyl, (C<sub>1</sub>-C<sub>6</sub>)-alkylamino or W-R<sup>7</sup>,

in which

W represents NH, O or a bond,

R<sup>7</sup> is as defined above

and

\* denotes the point of attachment to the phenolic oxygen,

R<sup>1</sup> and R<sup>2</sup> independently of one another represent hydrogen, halogen or cyano,

R<sup>3</sup> and R<sup>4</sup> independently of one another represent hydrogen, fluorine or chlorine,

R<sup>5</sup> represents a radical selected from the group consisting of:

hydrogen, hydroxyl, halogen, trifluoromethyl,

(C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy,

where cycloalkyl, alkyl and alkoxy for their part may be substituted by hydroxyl, carboxyl, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy, (C<sub>1</sub>-C<sub>6</sub>)-alkoxycarbonyl, (C<sub>6</sub>-C<sub>10</sub>)-aryl, NR<sup>8</sup>R<sup>9</sup> or C(=O)NR<sup>8</sup>R<sup>9</sup>,

in which

R<sup>8</sup> and R<sup>9</sup> independently of one another represent hydrogen, (C<sub>1</sub>-C<sub>8</sub>)-alkyl, optionally (C<sub>1</sub>-C<sub>6</sub>)-alkyl-substituted (C<sub>3</sub>-C<sub>6</sub>)-cycloalkyl, optionally halogen-substituted (C<sub>6</sub>-C<sub>10</sub>)-aryl or 5- to 10-membered heteroaryl

or

R<sup>8</sup> and R<sup>9</sup> together with the nitrogen atom to which they are attached form a 5- or 6-membered heterocycle which may contain a further heteroatom O or N in the ring and which may be substituted by (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkanoyl or (C<sub>1</sub>-C<sub>6</sub>)-alkoxycarbonyl,

(C<sub>6</sub>-C<sub>10</sub>)-aryl, (C<sub>6</sub>-C<sub>10</sub>)-aryloxy, 5- to 10-membered heteroaryl, 5- to 10-membered heteroaryloxy, 5- to 10-membered heterocyclyl which is attached via a carbon atom,

where aryl, aryloxy, heteroaryl, heteroaryloxy and heterocyclyl for their part may be substituted by halogen, cyano, nitro, carboxyl, amino, trifluoromethyl, optionally hydroxyl-substituted (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy, (C<sub>1</sub>-C<sub>6</sub>)-alkylamino, (C<sub>1</sub>-C<sub>6</sub>)-alkanoyl, (C<sub>1</sub>-C<sub>6</sub>)-alkoxycarbonyl, (C<sub>1</sub>-C<sub>6</sub>)-alkanoylamino, (C<sub>1</sub>-C<sub>6</sub>)-alkoxycarbonylamino or 5- or 6-membered heterocyclyl,

$\text{NR}^{10}\text{R}^{11}$

in which

$\text{R}^{10}$  and  $\text{R}^{11}$  independently of one another represent hydrogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl, (C<sub>6</sub>-C<sub>10</sub>)-aryl or 5- to 10-membered heteroaryl,

where alkyl and cycloalkyl for their part may be substituted by hydroxyl, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy, (C<sub>6</sub>-C<sub>10</sub>)-aryl, 5- to 10-membered heteroaryl or  $\text{NR}^{15}\text{R}^{16}$ ,

in which

$\text{R}^{15}$  and  $\text{R}^{16}$  independently of one another represent hydrogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>3</sub>-C<sub>6</sub>)-cycloalkyl, (C<sub>6</sub>-C<sub>10</sub>)-aryl or 5- or 6-membered heteroaryl

or

$\text{R}^{15}$  and  $\text{R}^{16}$  together with the nitrogen atom to which they are attached form a 5- or 6-membered heterocycle which may contain a further heteroatom O or N in the ring and which may be substituted by (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkanoyl or (C<sub>1</sub>-C<sub>6</sub>)-alkoxycarbonyl,

and

aryl and heteroaryl for their part may be substituted by halogen, hydroxyl, amino, cyano, trifluoromethyl, (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy, (C<sub>1</sub>-C<sub>6</sub>)-alkylamino or (C<sub>1</sub>-C<sub>6</sub>)-alkanoylamino,

or

$R^{10}$  and  $R^{11}$  together with the nitrogen atom to which they are attached form a 4- to 6-membered heterocycle which may contain a further heteroatom O or N in the ring and which may be substituted by fluorine, hydroxyl, carboxyl, 5- to 7-membered heterocyclyl which may contain one or two further heteroatoms N and/or O in the ring and which for its part may be substituted by (C<sub>1</sub>-C<sub>4</sub>)-alkyl or (C<sub>1</sub>-C<sub>4</sub>)-alkoxycarbonyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy, optionally hydroxyl-, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy- or  $NR^{17}R^{18}$ -substituted (C<sub>1</sub>-C<sub>4</sub>)-alkyl, (C<sub>1</sub>-C<sub>4</sub>)-alkanoyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxycarbonyl or  $NR^{12}R^{13}$ ,

where

$R^{12}$  and  $R^{13}$  independently of one another represent hydrogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxycarbonyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl or (C<sub>1</sub>-C<sub>4</sub>)-alkanoyl

or

$R^{12}$  and  $R^{13}$  together with the nitrogen atom to which they are attached form a 5- or 6-membered heterocycle which may contain a further heteroatom O or N in the ring and which may be substituted by (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkanoyl or (C<sub>1</sub>-C<sub>6</sub>)-alkoxycarbonyl,

and

$R^{17}$  and  $R^{18}$  independently of one another represent hydrogen, optionally hydroxyl-substituted (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>3</sub>-C<sub>6</sub>)-cycloalkyl, (C<sub>6</sub>-C<sub>10</sub>)-aryl or 5- or 6-membered heteroaryl

or

R<sup>17</sup> and R<sup>18</sup> together with the nitrogen atom to which they are attached form a 5- or 6-membered heterocycle which may contain a further heteroatom O or N in the ring and which may be substituted by (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkanoyl or (C<sub>1</sub>-C<sub>6</sub>)-alkoxycarbonyl,

or

R<sup>10</sup> and R<sup>11</sup> together with the nitrogen atom to which they are attached form a 7- to 12-membered bicyclic or tricyclic heterocycle which is fused or spirocyclic and which may have one or two further heteroatoms from the group consisting of N and O in the ring and which may be substituted by fluorine, (C<sub>1</sub>-C<sub>4</sub>)-alkyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxycarbonyl, (C<sub>1</sub>-C<sub>4</sub>)-alkanoyl or benzyl,

and C(=O)R<sup>14</sup>,

in which

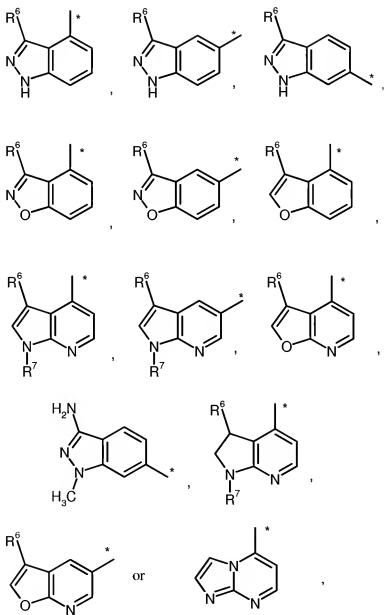
R<sup>14</sup> represents (C<sub>1</sub>-C<sub>6</sub>)-alkoxy, (C<sub>1</sub>-C<sub>6</sub>)-alkylamino or a 5- to 10-membered mono- or bicyclic heterocycle which is attached via a nitrogen atom, which is fused or spirocyclic and which may have one or two further heteroatoms from the group consisting of N and O in the ring,

where alkylamino for its part may be substituted by a 5- or 6-membered heterocycle, or a salt thereof.

## 2. (Previously Presented) The compound as claimed in claim 1

in which

A represents a radical



in which

$R^6$  represents hydrogen, (C<sub>1</sub>-C<sub>4</sub>)-alkyl or NH- $R^7$ ,

$R^7$  represents hydrogen or (C<sub>1</sub>-C<sub>4</sub>)-alkyl

and

\* denotes the point of attachment to the phenolic oxygen,

$R^1$  and  $R^2$  independently of one another represent hydrogen, fluorine or chlorine,

$R^3$  and  $R^4$  independently of one another represent hydrogen or fluorine,

$R^5$  represents a radical selected from the group consisting of:

hydrogen, chlorine, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy,

where alkyl and alkoxy for their part may be substituted by hydroxyl, carboxyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy, (C<sub>1</sub>-C<sub>4</sub>)-alkoxycarbonyl, NR<sup>8</sup>R<sup>9</sup> or C(=O)NR<sup>8</sup>R<sup>9</sup>,

in which

$R^8$  and  $R^9$  independently of one another represent hydrogen, (C<sub>1</sub>-C<sub>8</sub>)-alkyl, optionally (C<sub>1</sub>-C<sub>4</sub>)-alkyl-substituted (C<sub>3</sub>-C<sub>6</sub>)-cycloalkyl, optionally halogen-substituted phenyl or 5- or 6-membered heteroaryl

or

$R^8$  and  $R^9$  together with the nitrogen atom to which they are attached form a morpholine, piperazine, piperidine or



pyrrolidine ring, where the rings for their part may be substituted by (C<sub>1</sub>-C<sub>4</sub>)-alkyl,

(C<sub>6</sub>-C<sub>10</sub>)-aryl, 5- or 6-membered heteroaryl, 5- or 6-membered heterocyclyl which is attached via a carbon atom,

where aryl, heteroaryl and heterocyclyl for their part may be substituted by halogen, cyano, nitro, carboxyl, amino, trifluoromethyl, optionally hydroxyl-substituted (C<sub>1</sub>-C<sub>4</sub>)-alkyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy, (C<sub>1</sub>-C<sub>4</sub>)-alkylamino, (C<sub>1</sub>-C<sub>4</sub>)-alkanoyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxycarbonyl, (C<sub>1</sub>-C<sub>4</sub>)-alkanoylamino, (C<sub>1</sub>-C<sub>4</sub>)-alkoxycarbonylamino or 6-membered heterocyclyl,

NR<sup>10</sup>R<sup>11</sup>

in which

R<sup>10</sup> and R<sup>11</sup> independently of one another represent hydrogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>3</sub>-C<sub>8</sub>)-cycloalkyl, phenyl or 5- or 6-membered heteroaryl,

where alkyl and cycloalkyl for their part may be substituted by hydroxyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy, phenyl, 5- or 6-membered heteroaryl or NR<sup>15</sup>R<sup>16</sup>,

in which

R<sup>15</sup> and R<sup>16</sup> independently of one another represent hydrogen, (C<sub>1</sub>-C<sub>4</sub>)-alkyl, (C<sub>3</sub>-C<sub>6</sub>)-cycloalkyl, phenyl or 5- or 6-membered heteroaryl

or

R<sup>15</sup> and R<sup>16</sup> together with the nitrogen atom to which they are attached form a morpholine, piperazine,

piperidine or pyrrolidine ring, where the rings for their part may be substituted by (C<sub>1</sub>-C<sub>4</sub>)-alkyl,

and

phenyl and heteroaryl for their part may be substituted by fluorine, chlorine, hydroxyl, amino, cyano, trifluoromethyl, (C<sub>1</sub>-C<sub>4</sub>)-alkyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy, (C<sub>1</sub>-C<sub>4</sub>)-alkylamino or (C<sub>1</sub>-C<sub>4</sub>)-alkanoylamino,

or

R<sup>10</sup> and R<sup>11</sup> together with the nitrogen atom to which they are attached form a 4- to 6-membered heterocycle which may contain a further heteroatom O or N in the ring and which may be substituted by fluorine, hydroxyl, carboxyl, 5- to 7-membered heterocyclyl which may contain one or two further heteroatoms N and/or O in the ring and which for its part may be substituted by (C<sub>1</sub>-C<sub>4</sub>)-alkyl or (C<sub>1</sub>-C<sub>4</sub>)-alkoxycarbonyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy, optionally hydroxyl-, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy- or NR<sup>17</sup>R<sup>18</sup>-substituted (C<sub>1</sub>-C<sub>4</sub>)-alkyl, (C<sub>1</sub>-C<sub>4</sub>)-alkanoyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxycarbonyl or NR<sup>12</sup>R<sup>13</sup>,

where

R<sup>12</sup> and R<sup>13</sup> independently of one another represent hydrogen or (C<sub>1</sub>-C<sub>4</sub>)-alkyl

or

R<sup>12</sup> and R<sup>13</sup> together with the nitrogen atom to which they are attached form a 5- or 6-membered heterocycle which may

contain a further heteroatom O or N in the ring and which may be substituted by (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkanoyl or (C<sub>1</sub>-C<sub>6</sub>)-alkoxycarbonyl,

and

R<sup>17</sup> and R<sup>18</sup> independently of one another represent hydrogen, optionally hydroxyl-substituted (C<sub>1</sub>-C<sub>4</sub>)-alkyl or phenyl

or

R<sup>17</sup> and R<sup>18</sup> together with the nitrogen atom to which they are attached form a pyrrolidine ring,

or

R<sup>10</sup> and R<sup>11</sup> together with the nitrogen atom to which they are attached form a 7- to 12-membered bicyclic or tricyclic heterocycle which is fused or spirocyclic, which may have one or two further heteroatoms from the group consisting of N and O in the ring and which may be substituted by (C<sub>1</sub>-C<sub>4</sub>)-alkyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxycarbonyl, (C<sub>1</sub>-C<sub>4</sub>)-alkanoyl or benzyl,

and C(=O)R<sup>14</sup>

in which

R<sup>14</sup> represents (C<sub>1</sub>-C<sub>6</sub>)-alkoxy, (C<sub>1</sub>-C<sub>6</sub>)-alkylamino or a 5- to 10-membered mono- or bicyclic heterocycle which is attached via a nitrogen atom, which is fused or spirocyclic and which may have one or two further heteroatoms from the group consisting of N and O in the ring,

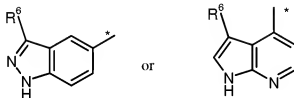
where alkylamino for its part may be substituted by a 5- or 6-membered heterocyclyl,

or a salt thereof.

3. (Previously Presented) The compound as claimed in claim 1

in which

A represents a radical



in which

$R^6$  represents hydrogen or methyl

and

\* denotes the point of attachment to the phenolic oxygen,

$R^1$  and  $R^2$  independently of one another represent hydrogen, fluorine or chlorine,

$R^3$  and  $R^4$  represent hydrogen,

$R^5$  represents a radical selected from the group consisting of:

hydrogen, chlorine, cyclohexyl, (C<sub>1</sub>-C<sub>4</sub>)-alkyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy,

where alkyl and alkoxy for their part may be substituted by hydroxyl, carboxyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy, methyloxycarbonyl, ethyloxycarbonyl, NR<sup>8</sup>R<sup>9</sup> or C(=O)NR<sup>8</sup>R<sup>9</sup>,

in which

R<sup>8</sup> and R<sup>9</sup> independently of one another represent hydrogen, (C<sub>1</sub>-C<sub>8</sub>)-alkyl, cyclopropyl, optionally methyl-substituted cyclopentyl or optionally fluorine-substituted phenyl

or

R<sup>8</sup> and R<sup>9</sup> together with the nitrogen atom to which they are attached form a piperidine, 2-methylpiperidine or 2,6-dimethylpiperidine ring,

phenyl, pyridyl, pyrrolyl, piperidin-3-yl, piperidin-4-yl, pyrrolidin-2-yl,

where phenyl, pyridyl and pyrrolyl for their part may be substituted by fluorine, chlorine, bromine, cyano, nitro, trifluoromethyl, methyl, hydroxymethyl, methoxy, dimethylamino or morpholinyl,

and

piperidin-3-yl, piperidin-4-yl and pyrrolidin-2-yl for their part may be substituted by methyl, ethyl, n-propyl, isopropyl, methylcarbonyl or ethylcarbonyl,

NR<sup>10</sup>R<sup>11</sup>

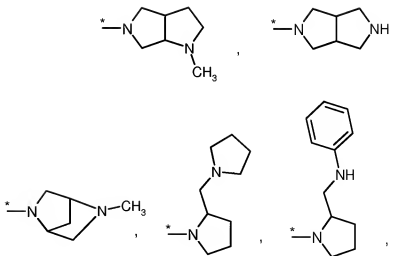
in which

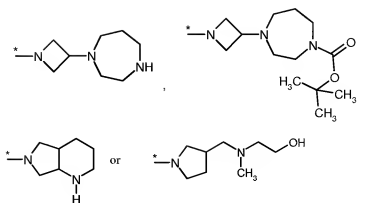
R<sup>10</sup> and R<sup>11</sup> independently of one another represent hydrogen, (C<sub>1</sub>-C<sub>4</sub>)-alkyl, 3-hydroxypropyl, 2-hydroxycyclohexyl, 2-aminocyclohexyl, phenyl, pyridyl or pyrazolyl,

where phenyl and pyridyl for their part may be substituted by chlorine, hydroxyl, amino, cyano, methyl or methoxy,

or

R<sup>10</sup> and R<sup>11</sup> together with the nitrogen atom to which they are attached form a piperazine, 3-methylpiperazine, 3,5-dimethylpiperazine, 4-isobutylpiperazine, morpholine, pyrrolidine, 3-aminopyrrolidine, 4-methylaminopyrrolidine, 3-(*N,N*-dimethylamino)pyrrolidine, 2-aminomethylpyrrolidine, 3-hydroxypyrrolidine, 2-hydroxymethylpyrrolidine or 2-methoxymethylpyrrolidine ring or a radical





in which

\* denotes the point of attachment to the pyrimidine ring,

and  $C(=O)R^{14}$

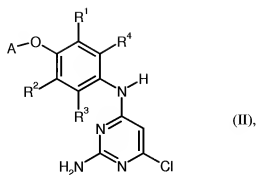
in which

$R^{14}$  represents methoxy, piperidinyl-N-ethylamino, piperidinyl or piperazinyl,

or a salt thereof.

4. (Original) A process for preparing compounds as defined in claim 1, characterized in that either

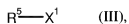
[A] compounds of the formula (II)



in which

A, R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are as defined in claim 1

are reacted with compounds of the formula (III)



in which

R<sup>5</sup> is as defined in claim 1 and

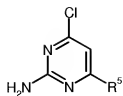
X<sup>1</sup> represents hydrogen, B(OH)<sub>2</sub> or a boronic acid ester such as



or

[B] compounds of the formula (IV)



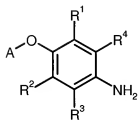


(IV),

in which

R<sup>5</sup> is as defined in claim 1

are reacted with compounds of the formula (V)



(V),

in which

A, R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are as defined in claim 1.

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Previously Presented) A pharmaceutical composition comprising a compound as defined in claim 1 in combination with an inert nontoxic pharmaceutically acceptable auxiliary.

11. (Canceled)

12. (Previously Presented) A method for the treatment of erectile dysfunction in a human or animal, comprising administering to said human or animal, a cardiovascularly effective amount of a compound as defined in claim 1.